

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/IL2004/000862

International filing date (day/month/year)  
19.09.2004

Priority date (day/month/year)  
22.09.2003

International Patent Classification (IPC) or both national classification and IPC  
B01D29/11, B01D29/46

Applicant  
ARKAL FILTRATION SYSTEMS C.S. LTD.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IL2004/000862

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
- 3 ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IL2004/000862

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**Box No. II Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

4. Additional observations, if necessary:

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**Re Item V.**

1 The following documents are referred to in this communication:

D1 : US 6 398 037 B1 (SADAN YIFTACH ET AL) 4 June 2002 (2002-06-04)

D2 : US 4 655 910 A (TABOR ELHANAN) 7 April 1987 (1987-04-07)

D3 : GB 1 316 324 A (WAVIN BV) 9 May 1973 (1973-05-09)

2 Document D1, cited by the applicant, is considered to represent the most relevant state of the art. It is to note that in addition to the features of the pre-characterising clause of claim 1, D1 discloses a male screw-thread ring 38 (cf. column 3, lines 17-19) forming part of the "fixed member" abutting against the filter member.

From this, the subject-matter of claim 1 differs in the remaining characterising features. The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

3.1 The problem to be solved by the present application may be regarded as an improvement of the screw-coupling arrangement of the **liquid filter device** known from D1 (cf. page 2, second paragraph, of the present application).

3.2 Document D3 relates to a **pipe connection**. According to "part A" of D3, a male-threaded pipe end is inserted into a sleeve portion 2 having a frusto-conical (cone shaped) trough 4. A frusto-conical female screw-threaded split ring 5 is encompassed by trough 4. The coupling arrangement being such that upon threading both parts together, the split ring becomes attracted towards the pipe end and thus self-tightened by friction clamping with the cone-shaped trough.

3.3 Thus, the principle of a screw-coupling arrangement proposed by the present application is known as such for pipe connections since years (cf. D3). However, it is questionable that a person skilled in liquid filtering devices and especially in those of the type of the present application would consider pipe connections for improving coupling arrangements in his field.

The solution proposed in claim 1 of the present application is therefore considered as

involving an inventive step (Article 33(3) PCT).

**Re Item VIII.**

- 1 It is not clear from claim 1 what is meant by "fixed member" (the term is not used in the description of the preferred embodiment). Further, the features of claim 3 appear to be essential for proper working of the filtering device and should be incorporated in claim 1. This is confirmed on page 4, lines 14 and 15.
- 2 Claims 7 and 8 are not clear with respect to the words "in use as". If both claims should constitute use claims, they should be formulated accordingly.